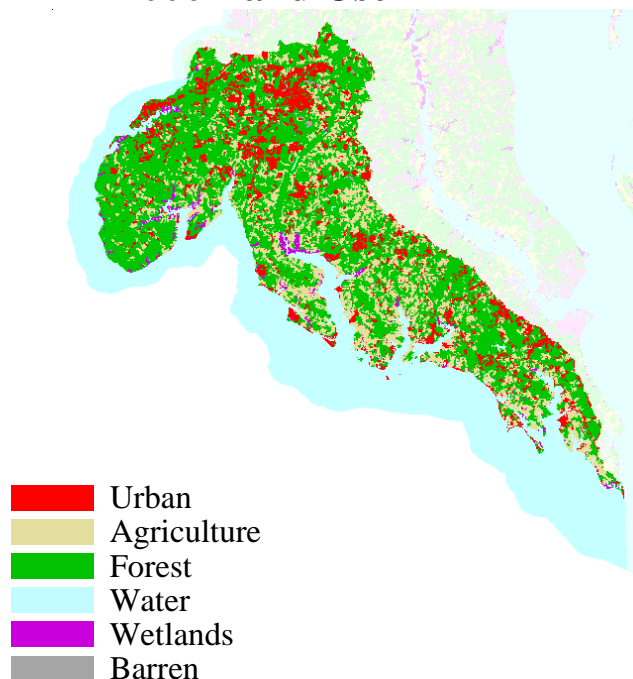


Lower Potomac River Basin Summary

Executive Summary
1985-2003 data, February 2005

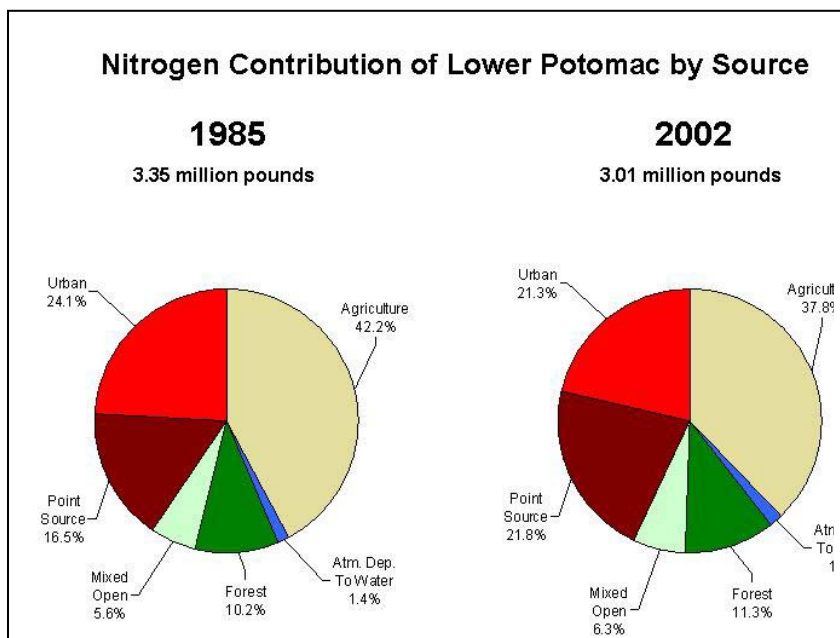
The Lower Potomac River Basin is largely forested (60 percent). Agricultural lands make up 24 percent and developed areas 16 percent. Agricultural lands, point sources (municipal wastewater treatment plants and industrial outputs), and urban runoff all contribute significantly to the nitrogen loadings. Agricultural lands (41 percent) and urban runoff (34 percent) are the main sources of phosphorus, and agricultural lands contribute most of the sediment (68 percent).

MDP 2000 Land Use



LOADINGS (based on watershed model)

Modeled nitrogen, phosphorus, and sediment loadings have decreased.



- Total nitrogen loadings have decreased 10 percent from 1985 to 2002 (down from 3.4 to 3.0 million pounds).
- Total phosphorus loadings have decreased almost 38 percent from 1985 to 2002 (down from 0.3 to 0.2 million pounds).
- Sediment loadings have declined by about 30 percent from 1985 to 2002 (down from 101,000 tons to 71,000 tons).

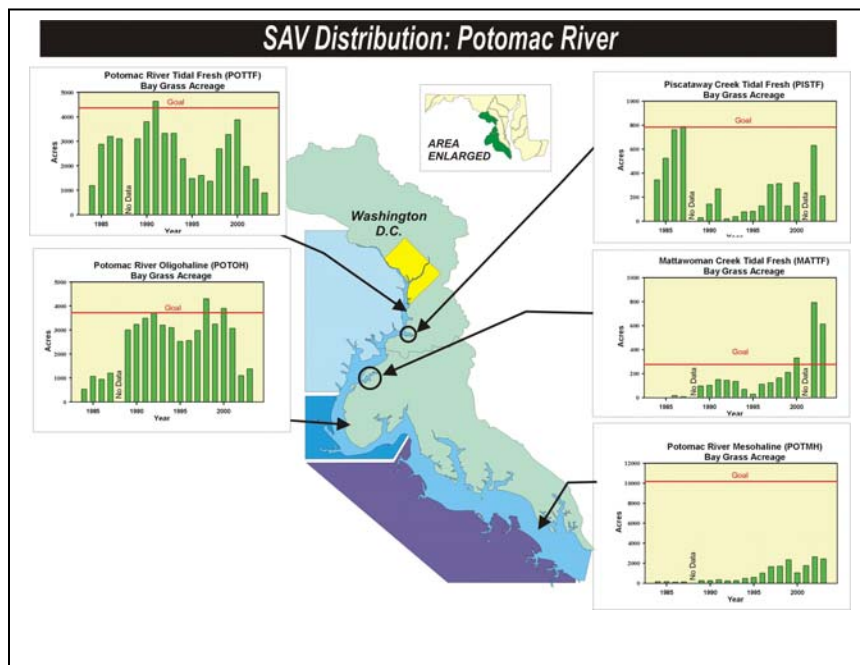
LONG-TERM TIDAL WATER QUALITY (based on monitoring concentration data)

Despite some decreases in nitrogen, levels remain high and algal levels have increased at several stations.

- Nitrogen levels have declined at many stations, but levels are still very high (poor condition) at the Indian Head and Morgantown Bridge stations.
- Phosphorus and suspended solids levels have improved at only one station (Maryland Route 225), and have worsened at Point Lookout, which is heavily influenced by mainstem water.
- Algal abundance has increased at Indian Head, Quantico, and Morgantown Bridge despite nitrogen reductions.
- Dissolved oxygen levels are poor at the downstream stations nearest the mainstem.
- Continuous monitoring data was collected in 2004 at Sage Point on the St. Mary's River, at Piney Point on the Potomac, and at Mattawoman Creek. See www.eyesonthebay.net.
- Water quality mapping was conducted in the St. Mary's River in 2004. See www.eyesonthebay.net.

BIOLOGICAL and ECOSYSTEM MONITORING

Bay grasses and biological communities are all in poor condition.



- Bay grass beds in Mattawoman Creek (tidal fresh) have attained the goal, but remain well below the goal in the Potomac oligohaline and mesohaline areas.
- Benthic community was poor throughout the Potomac River estuary, and worst in the lower mesohaline.
- From Indian Head to Maryland Point, stations were largely nutrient saturated in all seasons. Morgantown Bridge showed some

phosphorus limitation in spring and some nitrogen limitation in summer, but was mostly nutrient saturated in fall and winter. Ragged Point and Point Lookout, which are highly influenced by bay water, showed some phosphorus and some nitrogen limitation in spring and fall, and were largely nitrogen limited in the summer.

For more detailed information see the complete basin summary at:

http://www.dnr.state.md.us/bay/tribstrat/basin_summaries.html.